

# GELOY™ XTWE270M resin

Acrylonitrile Styrene Acrylate + SAN

SABIC Innovative Plastics Asia Pacific

Message:

Excellent weatherability, good flow/aesthetics and good impact.Profile co-extrusion grade over ABS, PVC or other compatible polymers. XTWE270M is available in various colours.

| General Information                        |                         |                        |                     |
|--------------------------------------------|-------------------------|------------------------|---------------------|
| Features                                   | Good Flow               |                        |                     |
|                                            | Good Impact Resistance  |                        |                     |
|                                            | Good Surface Finish     |                        |                     |
|                                            | Good Weather Resistance |                        |                     |
| Appearance                                 | Colors Available        |                        |                     |
| Processing Method                          | Profile Extrusion       |                        |                     |
| Physical                                   | Nominal Value           | Unit                   | Test Method         |
| Specific Gravity                           | 1.09                    | g/cm <sup>3</sup>      | ASTM D792, ISO 1183 |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)  | 9.7                     | g/10 min               | ASTM D1238          |
| Melt Volume-Flow Rate (MVR) (220°C/5.0 kg) | 2.00                    | cm <sup>3</sup> /10min | ISO 1133            |
| Molding Shrinkage - Flow (3.20 mm)         | 0.30 to 0.70            | %                      | Internal Method     |
| Water Absorption                           |                         |                        | ISO 62              |
| Saturation, 23°C                           | 0.80                    | %                      |                     |
| Equilibrium, 23°C, 50% RH                  | 0.20                    | %                      |                     |
| Mechanical                                 | Nominal Value           | Unit                   | Test Method         |
| Tensile Modulus                            |                         |                        |                     |
| -- <sup>1</sup>                            | 1910                    | MPa                    | ASTM D638           |
| --                                         | 1790                    | MPa                    | ISO 527-2/1         |
| Tensile Strength                           |                         |                        |                     |
| Yield <sup>2</sup>                         | 36.0                    | MPa                    | ASTM D638           |
| Yield                                      | 36.0                    | MPa                    | ISO 527-2/50        |
| Break <sup>3</sup>                         | 32.0                    | MPa                    | ASTM D638           |
| Break                                      | 26.0                    | MPa                    | ISO 527-2/50        |
| Tensile Elongation                         |                         |                        |                     |
| Yield <sup>4</sup>                         | 3.4                     | %                      | ASTM D638           |
| Yield                                      | 3.4                     | %                      | ISO 527-2/50        |
| Break <sup>5</sup>                         | 38                      | %                      | ASTM D638           |
| Break                                      | 28                      | %                      | ISO 527-2/50        |
| Flexural Modulus                           |                         |                        |                     |
| 50.0 mm Span <sup>6</sup>                  | 1830                    | MPa                    | ASTM D790           |

|                                                    |                   |                   |                                           |
|----------------------------------------------------|-------------------|-------------------|-------------------------------------------|
| -- <sup>7</sup>                                    | 1870              | MPa               | ISO 178                                   |
| Flexural Stress                                    |                   |                   |                                           |
| --                                                 | 56.0              | MPa               | ISO 178                                   |
| Yield, 50.0 mm Span <sup>8</sup>                   | 56.0              | MPa               | ASTM D790                                 |
| Impact                                             | Nominal Value     | Unit              | Test Method                               |
| Charpy Notched Impact Strength <sup>9</sup> (23°C) | 13                | kJ/m <sup>2</sup> | ISO 179/1eA                               |
| Notched Izod Impact                                |                   |                   |                                           |
| -30°C                                              | 70                | J/m               | ASTM D256                                 |
| 23°C                                               | 200               | J/m               | ASTM D256                                 |
| -30°C <sup>10</sup>                                | 7.0               | kJ/m <sup>2</sup> | ISO 180/1A                                |
| 23°C <sup>11</sup>                                 | 13                | kJ/m <sup>2</sup> | ISO 180/1A                                |
| Instrumented Dart Impact (23°C, Total Energy)      | 28.0              | J                 | ASTM D3763                                |
| Thermal                                            | Nominal Value     | Unit              | Test Method                               |
| Deflection Temperature Under Load                  |                   |                   |                                           |
| 1.8 MPa, Unannealed, 3.20 mm                       | 69.0              | °C                | ASTM D648                                 |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>12</sup>    | 71.0              | °C                | ISO 75-2/Af                               |
| Vicat Softening Temperature                        |                   |                   |                                           |
| --                                                 | 85.0              | °C                | ASTM D1525, ISO 306/B120 10 <sup>13</sup> |
| --                                                 | 82.0              | °C                | ISO 306/B50                               |
| CLTE                                               |                   |                   |                                           |
| Flow : -40 to 40°C                                 | 9.2E-5            | cm/cm/°C          | ASTM E831                                 |
| Flow : -40 to 40°C                                 | 1.0E-4            | cm/cm/°C          | ISO 11359-2                               |
| Transverse : -40 to 40°C                           | 1.1E-4            | cm/cm/°C          | ASTM E831                                 |
| Transverse : -40 to 40°C                           | 1.2E-4            | cm/cm/°C          | ISO 11359-2                               |
| Extrusion                                          | Nominal Value     | Unit              |                                           |
| Drying Temperature                                 | 85.0 to 95.0      | °C                |                                           |
| Drying Time                                        | 8.0               | hr                |                                           |
| Suggested Max Moisture                             | 0.020             | %                 |                                           |
| Hopper Temperature                                 | 60.0 to 80.0      | °C                |                                           |
| Cylinder Zone 1 Temp.                              | 180 to 200        | °C                |                                           |
| Cylinder Zone 2 Temp.                              | 180 to 200        | °C                |                                           |
| Cylinder Zone 3 Temp.                              | 180 to 205        | °C                |                                           |
| Cylinder Zone 4 Temp.                              | 180 to 205        | °C                |                                           |
| Adapter Temperature                                | 180 to 205        | °C                |                                           |
| Melt Temperature                                   | 190 to 210        | °C                |                                           |
| Die Temperature                                    | 185 to 205        | °C                |                                           |
| Calibration Temp, First                            | 50.0 to 70.0      | °C                |                                           |
| NOTE                                               |                   |                   |                                           |
| 1.                                                 | 5.0 mm/min        |                   |                                           |
| 2.                                                 | Type I, 50 mm/min |                   |                                           |
| 3.                                                 | Type I, 50 mm/min |                   |                                           |

|     |                                    |
|-----|------------------------------------|
| 4.  | Type I, 50 mm/min                  |
| 5.  | Type I, 50 mm/min                  |
| 6.  | 1.3 mm/min                         |
| 7.  | 2.0 mm/min                         |
| 8.  | 1.3 mm/min                         |
| 9.  | 80*10*4 sp=62mm                    |
| 10. | 80*10*4                            |
| 11. | 80*10*4                            |
| 12. | 80*10*4 mm                         |
| 13. | Rate B (120°C/h), Loading 2 (50 N) |

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### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

